

1       1. A planar light wave circuit comprising:  
2           a substrate;  
3           a pair of waveguides formed on said substrate;  
4       and  
5           a coupling region formed between said waveguides,  
6       at least one of said waveguides being segmented in said  
7       coupling region.

1       2. The circuit of claim 1 wherein both of said pair  
2       of waveguides are segmented in said coupling region.

1       3. The circuit of claim 1 wherein one of said  
2       waveguides are segmented by having at least two gaps along  
3       the length of said waveguide in said coupling region.

1       4. The circuit of claim 3 wherein said gaps are  
2       irregularly sized along the length of said coupling region.

1       5. The circuit of claim 3 wherein said gaps are  
2       regularly sized along the length of said coupling region.

1       6. A method comprising:  
2                 coupling a pair of light signals in a coupling  
3         region along two planar waveguides; and  
4                 using gaps between segments along the length of  
5         said coupling region to control the coupling of signals  
6         between said waveguides.

1       7. The method of claim 6 including forming a  
2         segmented coupling region between said two planar  
3         waveguides.

1       8. The method of claim 6 including segmenting both  
2         of said waveguides.

1       9. The method of claim 6 including forming gaps of  
2         irregular size along the length of the coupling region.

1       10. The method of claim 6 including forming gaps of  
2         regular size along the length of said coupling region.

1       11. An optical circuit comprising:  
2                 a substrate;  
3                 a pair of planar waveguides formed on said  
4         substrate; and  
5                 each of said waveguides including a segmented  
6         region including waveguide portions separated from one

7 another by gaps to form a coupling region of each  
8 waveguide, said coupling region of each waveguide being  
9 juxtaposed with the coupling region of the other waveguide.

1       12. The circuit of claim 11 wherein each of said  
2 waveguides includes at least two gaps.

1       13. The circuit of claim 11 wherein said circuit is a  
2 planar light wave circuit.

1       14. The circuit of claim 11 wherein said gaps are  
2 regularly sized along the length of each waveguide.

1       15. The circuit of claim 11 wherein said gaps are  
2 irregularly sized along the length of each waveguide.

1       16. The circuit of claim 11 wherein said gaps are  
2 arranged to improve the coupling between said waveguides.